



[7590-01-P]

## NUCLEAR REGULATORY COMMISSION

[NRC-2019-0113]

### **Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light Water Reactors**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Draft regulatory guide; request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment draft regulatory guide (DG), DG-1353, “Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light Water Reactors.” This DG proposes new guidance for designers, applicants, and licensees of non-light water cooled nuclear reactors (non-LWRs) to inform the licensing basis and content of applications submittals to the NRC for licenses, certifications, or approvals. The DG provides guidance on using a technology-inclusive, risk-informed, and performance-based methodology to inform the licensing basis and content of applications for licenses, certifications, and approvals for non-LWRs.

**DATES:** Submit comments by **[INSERT DATE 60 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date. Although a time limit is given, comments and suggestions in connection with items for inclusion in guides currently being developed or improvements in all published guides are encouraged at any time.

**ADDRESSES:** You may submit comments by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2019-0113**. Address questions about NRC docket IDs in Regulations.gov to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@nrc.gov. For technical questions, contact the individuals listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **Mail comments to:** Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Program Management, Announcements and Editing Staff.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

**FOR FURTHER INFORMATION CONTACT:** William Reckley, Office of New Reactors, telephone: 301-415-7490, e-mail: William.Reckley@nrc.gov, or Stanley Gardocki, Office of Nuclear Regulatory Research, telephone: 301-415-1067, e-mail: [Stanley.Gardocki@nrc.gov](mailto:Stanley.Gardocki@nrc.gov). Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

**SUPPLEMENTARY INFORMATION:**

**I. Obtaining Information and Submitting Comments**

**A. Obtaining Information**

Please refer to Docket ID **NRC-2019-0113** when contacting the NRC about the availability of information regarding this action. You may obtain publically-available information related to this action, by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2019-0113**.

- **NRC's Agencywide Documents Access and Management System**

**(ADAMS):** You may obtain publicly available documents online in the ADAMS Public Document collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search\_". For problems with ADAMS, contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). The DG is electronically available in ADAMS under Accession No. ML18312A242. The related working draft of Nuclear Energy Institute (NEI) guidance document NEI 18-04, "Risk-Informed Performance-Based Guidance for Non-Light Water Reactor Licensing Basis Development," is available in ADAMS under Accession No. ML18271A172. The regulatory analysis for this DG is available in ADAMS under Accession No. ML18325A214.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

**B. Submitting Comments**

Please include Docket ID **NRC-2019-0113** in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC posts all comment submissions at <http://www.regulations.gov> as well as enters the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying

or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

## **II. Additional Information**

The NRC is issuing for public comment a DG in the NRC's "Regulatory Guide" series. This series was developed to describe and make available to the public information regarding methods that are acceptable to the NRC staff for implementing specific parts of the NRC's regulations, techniques that the staff uses in evaluating specific issues or postulated events, and data that the staff needs in its review of applications for permits and licenses.

The DG, entitled "Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light Water Reactors," is a proposed new RG. The proposed new RG is temporarily identified by its task number, DG-1353. The proposed new RG endorses, with clarifications, the principles and methodology in NEI 18-04, "Risk-Informed Performance-Based Guidance for Non-Light Water Reactor Licensing Basis Development," as one acceptable method for determining the appropriate scope and level of detail for parts of applications for licenses, certifications, and approvals for non-LWRs. NEI 18-04 outlines an approach for use by reactor developers to select licensing basis events; classify structures, systems, and components; determine special treatments and programmatic controls; and assess the adequacy of a design in terms of providing layers of defense in depth. The methodology described in NEI 18-04 and the draft RG also provide a general methodology for identifying an appropriate scope and depth of information to be

provided in applications to the NRC for licenses, certifications, and approvals for non-LWRs.

### **III. Backfitting and Issue Finality**

Draft regulatory guide, DG-1353, if finalized as a new regulatory guide, would provide guidance for informing the licensing basis and content of applications for non-LWRs. The selection of licensing-basis events; classification and special treatments of structures, systems, and components; and assessment of defense in depth are fundamental to the safe design of non-LWRs. These activities also support identifying the appropriate scope and depth of information provided in applications for licenses, certifications, and approvals required under part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), “Domestic Licensing of Production and Utilization Facilities,” and 10 CFR part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants.” The methodology outlined in DG-1353 and NEI 18-04 provide guidance intended to support the design and licensing of non-LWRs.

The DG, if finalized, would not constitute regulatory requirements. For this reason, issuance of DG-1353, if finalized, would not constitute backfitting under 10 CFR 50.109 (the “Backfit Rule”). Future applicants may choose to follow the guidance or utilize another approach in developing applications for licenses, certifications, or approvals. Applicants and potential applicants are not, with certain exceptions, protected by either the Backfit Rule or any issue finality provisions under 10 CFR part 52. Neither the Backfit Rule nor the issue finality provisions under 10 CFR part 52—with certain exclusions discussed below—were intended to apply to every NRC action which substantially changes the expectations of current and future applicants. Therefore, the positions in any regulatory guide, if imposed on applicants under

10 CFR 50.34(a)(3), 52.47(a)(3), 52.79(a)(4), 52.137(a)(3), or 52.157(a), would not represent backfitting or a violation of issue finality (except as discussed below).

The exceptions to the general principle are applicable whenever a combined license applicant references a 10 CFR part 52 license (i.e., an early site permit or a manufacturing license) and/or 10 CFR part 52 regulatory approval (i.e., a design certification rule or design approval). There are no current non-LWR applicants or holders of licenses or design certifications for non-LWR designs. Therefore, issuance of DG-1353 in final form would not constitute a violation of issue finality.

Dated at Rockville, Maryland, this 30<sup>th</sup> day of April, 2019.

For the Nuclear Regulatory Commission.

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